REMARKS/ARGUMENTS

Reconsideration of the present application, as amended, is respectfully requested.

STATUS OF CLAIMS

As a result of the present amendment, claims 1- 34 remain in the case for continued prosecution.

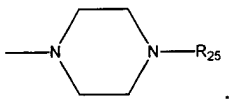
REJECTIONS UNDER 35 U.S.C. §112, FIRST PARAGRAPH

The Examiner has rejected claims 29-33 under 35 U.S.C. §112, 1st paragraph, for failing to provide enablement for the methods of treatment. Claim 29 has been amended to further clarify the methods of treatment claimed herein. It is respectfully submitted that claims 29-33 are in proper form and that the rejection can be removed. It is noted that the claims now specify that the methods are directed to treatment of mammals with prodrugs. The term "prodrug" is well known to those of ordinary skill in the art and is understood to mean chemical derivatives of a biologically-active compound which eventually liberates the active parent compound in vivo after being administered. Prodrugs allow the artisan to modify various properties of an active agent, including the onset and/or duration of biological activity. The artisan further understands that prodrugs are often biologically inert or substantially inactive forms of the active compound. In the case of the present invention, the rate of hydrolysis and thus restoration of biological activity is preferably influenced by exposure to light or another energy source after targeting of the prodrug has been allowed to proceed in vivo. The claimed invention is directed to an improvement in a platform technology wherein the actual therapeutic agent can be one of a myriad of possibilities. A common thread throughout, however is the fact that the cinnimate platform -based prodrug is administered and the active ingredient is released.

REJECTIONS UNDER 35 U.S.C. §102(b)

The Examiner has rejected the subject matter of claims 1-4, 7, 24, 26 and 34 under 35 U.S.C. §102(b) as being anticipated by Porter, et al. (U.S. Patent No. 5,114,851). A rejection under 35 U.S.C. §102(b) requires that all of the elements of the rejected claims be found within the cited reference. In view of the amendments and arguments presented herein, it is respectfully urged that the presently claimed invention is not described in the '851 patent and that the pending claims are not anticipated by the cited reference.

As pointed out in the Background of the Invention section, Porter et al. in the '851 patent discloses coupling an enzyme active site amino acid residue to cinnamate (CINN) derivatives to form *o*-hydroxy cinnamate substituted esters or acyl enzymes, which are inactive. On photolysis, the bond with the active site amino acid residue is cleaved and the active site is exposed. There is no disclosure or suggestion of further modification of the cinnamate core platform beyond the formation of inhibited enzymes. Specifically, the '851 patent is silent with regard to including one or more of the Z moieties now claimed by Applicants. This improvement allows the cinnamate core to be bifunctional so as to not only allow attachment of biologically active materials thereto (e.g. CINN-X_1-A) but also allow for further substitution and enhancement of the platform (e.g. Z-CINN-X_1-A). Completely unlike the '851 patent, the claimed bifunctional Z moieties facilitate better targeting of therapeutic agents to sites of interest in the body. In the past, the artisan has had little ability to control when and in what amount a drug can be generated in the therapeutically desired area. The specific Z moieties claimed herein are NR_7R_8 and



While the '851 patent discloses an apparently similar substituted amine for the variable Y in formula (III), closer inspection reveals that the R_8 variables of the present invention quite different from anything disclosed in the '851 patent, namely $(CR_9R_{10})_n$-NR_{22}-R_{11}, $(CR_9R_{10})_n$-CH_2-NHC(O)R_{26} and $(CR_9R_{10})_n$-CH_2-E. These are the groups which allow cinnamate platform to be expanded. Briefly stated, since Z contains the structure (-NR_7R_8), and since R_8 contains an additional nitrogen (N) atom that can be reacted with a linker compound and another biologically active moiety, the claimed compound is unlike that taught by Porter et al. Further aspects which are missing from Porter et al. are those in which Z contains the structure –piperazine-R_{26}, linked as shown in formula (I), where the 4-nitrogen is available for further reaction as mentioned above.

The Examiner has also applied the reference to other claims besides claim 1 for purposes of rejecting the claims under §102(b). In response, Applicants have also amended the claims were necessary to emphasize the specific Z groups which are not disclosed or suggested by Porter et al. It is respectfully submitted therefore that all of the amended claims patentably distinguish over the reference and that the rejection be removed.

REJECTIONS UNDER 35 U.S.C. §103(a)

The Examiner has rejected claims 29-33 under 35 U.S.C. §103(a) as being unpatentable over Li, et al. in view of Porter, et al. Applicants respectfully traverse the rejection of the Examiner and it is urged that a proper *prima facie* case of obviousness has not been made by the Examiner. A *prima facie* case of obviousness is established only when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. The art must suggest how to apply its teachings to the specifically claimed invention. Applicants urge that since neither reference discloses the specific Z groups claimed herein, it must be concluded that the methods of treatrment claimed herein using the prodrugs having the Z moieties with their beneficial properties discussed above must also be distinguishable over the combination of references relied upon by the Examiner. The shortcomings of Porter et al. have been set forth above. The Examiner has stated that Li et al. disclose a method of treating urinary bladder bleeding by administering an effective amount of thrombin. There is no disclosure or suggestion in Li et al. of using the novel cinnamate core platform of Applicants. Thus, even if one were to combine the refernces as proposed by the Examiner, it would fail to render these claims obvious. Reconsiderationand removal of the rejection is respectfully requested.

ALLOWABLE SUBJECT MATTER

Applicants note with appreciation the Examiner's indication of allowable subject mater but urge that all of the pending claims currently under consideration patentably distinguish over the prior art of record.

FEES

This response is being filed within the shortened period for response. No further fees are believed to be required. If it is determined that any fees are due or any overpayment has been made, the Commissioner is hereby authorized to debit or credit such sum to Deposit Account No. 02-2275.

Pursuant to 37 C.F.R. 1.136(a)(3), please treat this and any concurrent or future reply in this application that requires a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. The fee associated therewith is to be

charged to Deposit Account No. 02-2275.

CONCLUSION

In view of the actions taken and arguments presented, it is respectfully submitted that the present application is now in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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